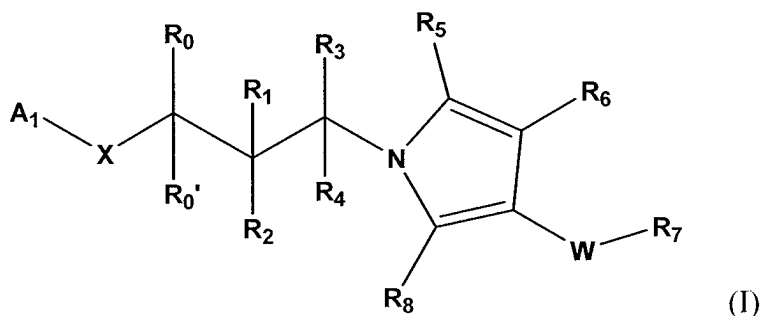


AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound having the structure:



wherein:

X is nitrogen, oxygen, or optionally substituted carbon;

W is absent or is selected from the group consisting of -O-, -S-, -S(O)-, -SO₂-, -NH-, -NH-CO-, -NR'CO-, -NHSO₂-, -NR'SO₂-, -CO-, -CO₂-, -CH₂-, -CF₂-, -CHF-, -CONH-, -CONR'-, and -NR'-, where R' is alkyl, substituted alkyl, cycloalkyl, aryl, heteroaryl, heterocyclo;

A₁ is an optionally substituted aryl or heteroaryl six-membered heterocyclic group having N as the only ring heteroatom;

R₀ and R₀' are independently selected from the group consisting of hydrogen and methyl;

R₁, R₂, R₃, and R₄ are independently selected from the group consisting of hydrogen, and optionally substituted loweralkyl, cycloloweralkyl, cyclicaminoalkyl, alkylaminoalkyl, loweralkoxy, amino, alkylamino, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteroaralkylcarbonyl, and aryl and heteroaryl;

R₅ and R₈ are independently selected from the group consisting of hydrogen, halo, and optionally substituted loweralkyl, cycloalkyl, alkoxy, amino, aminoalkoxy, carbonyloxy, aminocarbonyloxy, alkylcarbonylamino, arylcarbonylamino, aralkylcarbonylamino, ~~heteroarylcarbonylamino, heteroaralkylcarbonylamino,~~ cycloimido, ~~heterocycloimido,~~ amidino, cycloamidino, ~~heterocycloamidino,~~ guanidinyl, aryl, biaryl, ~~heteroaryl, heteroarylaryl,~~

~~heteroaryl~~~~heteroaryl~~, ~~heterocycloalkyl~~, ~~heterocyclocarbonyloxy~~, ~~heteroarylcarbonyloxy~~, and arylsulfonamido;

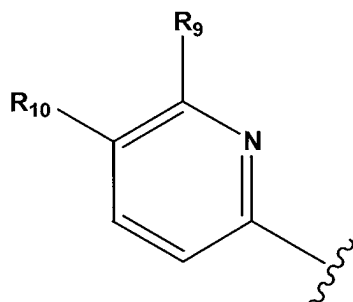
R₆ is selected from the group consisting of hydrogen, and optionally substituted aryl, ~~heteroaryl~~, and ~~heterocyclo~~;

R₇ is selected from the group consisting of hydrogen, hydroxy, halo, carboxyl, nitro, amino, amido, amidino, imido, cyano, sulfonyl, methanesulfonyl, and substituted or unsubstituted alkyl, alkoxy, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, ~~heteroarylcarbonyl~~, ~~heteroaralkylcarbonyl~~, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, ~~heteroarylcarbonyloxy~~, ~~heteroaralkylcarbonyloxy~~, alkylaminocarbonyloxy, arylamino-carbonyloxy, formyl, loweralkylcarbonyl, loweralkoxycarbonyl, aminocarbonyl, aminoaryl, alkylsulfonyl, sulfonamido, aminoalkoxy, alkylamino, ~~heteroarylamino~~, alkylcarbonylamino, alkylaminocarbonylamino, arylaminocarbonylamino, aralkylcarbonylamino, ~~heteroarylcarbonylamino~~, arylcarbonylamino, ~~heteroarylcarbonylamino~~ cycloamido, cyclothioamido, cycloamidino, ~~heterocycloamidino~~, cycloalkyl, cycloimido, ~~heterocycloimido~~, guanidinyl, aryl, ~~heteroaryl~~, ~~heterocyclo~~, ~~heterocycloalkyl~~, arylsulfonyl and arylsulfonamido;

the tautomers thereof;

or a pharmaceutically acceptable salt thereof.

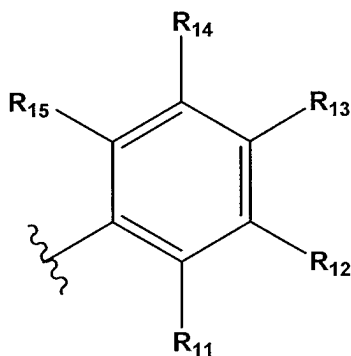
2. (Original) A compound of claim 1 wherein X is nitrogen.
3. (Currently amended) A compound of claim 1 wherein R₁, R₂, and R₃ are hydrogen and R₄ is selected from the group consisting of hydrogen, methyl, ethyl, aminoethyl, and dimethylaminoethyl, ~~pyridylethyl~~, ~~piperidinyl~~, ~~pyrrolidinylethyl~~, ~~piperazinylethyl~~ and ~~morpholinylethyl~~.
4. (Original) A compound of claim 1 wherein R₁, R₂, R₃, and R₄, are hydrogen.
5. (Original) A compound of claim 1 wherein A₁ has the formula:



(IV)

wherein R₉ and R₁₀ are independently selected from the group consisting of hydrogen, hydroxy, nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidiny, sulfonamido, carboxyl, formyl, loweralkyl, aminoloweralkyl, loweralkylamino-loweralkyl, haloloweralkyl, loweralkoxy, haloloweralkoxy, loweralkoxyalkyl, loweralkylamino-loweralkoxy, loweralkylcarbonyl, loweralkylcarbonyl, lowerheteroalkylcarbonyl, alkylthio, aryl and, aralkyl.

6. (Previously presented) A compound of claim 1 wherein at least one of R₅ and R₈ is a substituted or unsubstituted moiety of the formula:



(V)

wherein R₁₁, R₁₂, R₁₃, R₁₄, and R₁₅ are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, carboxyl, hydroxy, and optionally substituted loweralkyl, loweralkoxy, loweralkoxyalkyl, haloloweralkyl, haloloweralkoxy, aminoalkyl, alkylamino, aminoalkylalkynyl, alkylaminoalkylalkynyl, alkylthio, alkylcarbonylamino, aralkylcarbonylamino, heteroalkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, aminocarbonyl, loweralkylaminocarbonyl, aminoaralkyl, loweralkylaminoalkyl, aryl, heteroaryl, cycloheteroalkyl, aralkyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy,

arylcarbonyloxyalkyl, alkylcarbonyloxyalkyl, heteroarylcarbonyloxyalkyl, aralkylcarbonyloxyalkyl, and heteroaralkcarbonyloxyalkyl.

7. (Original) A compound of claim 6 wherein R₁₁, R₁₂, R₁₄ and R₁₅ are hydrogen and R₁₃ is selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, haloloweralkyl, aminocarbonyl, alkylaminocarbonyl and cyano.

8. (Original) A compound of claim 6 wherein R₁₁, R₁₃, and R₁₅ are hydrogen and R₁₂ and R₁₄ are independently selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, haloloweralkyl and cyano.

9. (Original) A compound of claim 6 wherein R₁₁, R₁₂, R₁₄, and R₁₅ are hydrogen and R₁₃ is heteroaryl.

10. (Original) A compound of claim 6 wherein R₁₁, R₁₂, R₁₄, and R₁₅ are hydrogen and R₁₃ is a heterocycloalkyl.

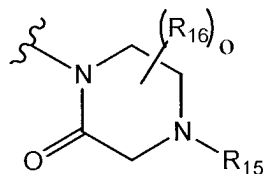
11. (Original) A compound of claim 6 wherein at least one of R₁₁, R₁₂, R₁₃, R₁₄, and R₁₅ are halo and the remainder of R₁₁, R₁₂, R₁₃, R₁₄, and R₁₅ are hydrogen.

12. (Currently amended) A compound of claim 1 wherein at least one of R₅ and R₈ is selected from the group consisting of dichlorophenyl, difluorophenyl, trifluoromethylphenyl, chlorofluorophenyl, bromochlorophenyl, ethylphenyl, methylchlorophenyl, imidazolylphenyl, cyanophenyl, morpholinophenyl and cyanochlorophenyl.

13. (Currently amended) A compound of claim 1 wherein R₆ is substituted or unsubstituted aryl or heteroaryl.

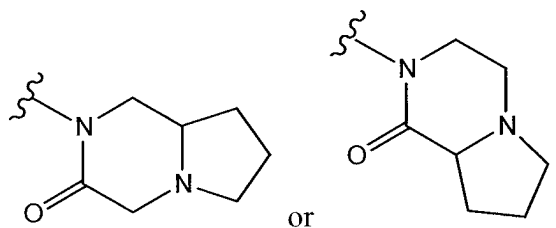
14. (Withdrawn) A compound of claim 1 wherein R₆ is substituted or unsubstituted pyridyl, pyrimidinyl, piperazinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl, triazolyl, thienyl, furanyl, quinolynyl, pyrrolylopyridyl, benzothiazolyl, benzopyridyl, benzotriazolyl, and benzimidazolyl.

15. (Withdrawn) A compound of claim 1 wherein R₆ is a monoketopiperazinyl group having the structure:



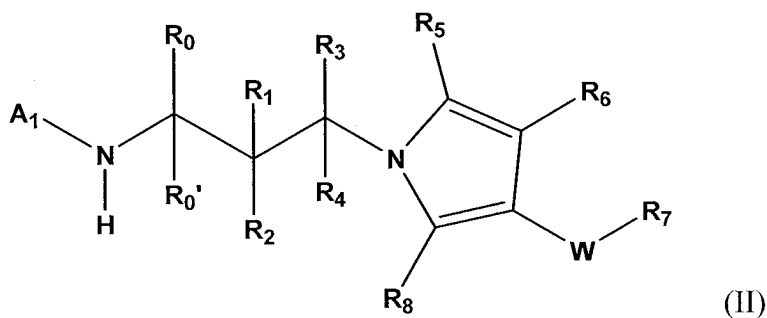
wherein R_{15} and R_{16} are independently selected from the group consisting of hydrogen, loweralkyl, loweralkynyl, aryl, heteroaryl, arylloweralkyl, loweralkylarylloweralkyl, haloloweralkyl, haloarylloweralkyl carbocyclic and heterocyclic; or R_8 can be taken with another R_{16} or with R_{15} to form a carbocyclic, heterocyclic or aryl ring; and o is an integer between 1 and 6.

16. (Withdrawn) A compound of claim 15 wherein R_{15} is loweralkyl, such as methyl, ethyl, n-propyl, isopropyl, cyclopropyl, n-butyl, iso-butyl or t-butyl, or R_{15} is taken with R_{16} to form a group having the structure:



17. (Original) A compound in claim 1 wherein R_5 and R_8 are independently hydrogen or lower alkyl.

18. (Currently amended) A compound having the structure:



wherein:

W is absent or is selected from the group consisting of $-O-$, $-S-$, $-S(O)-$, $-SO_2-$, $-NH-$, $-NH-CO-$, $-NR'CO-$, $-NH-SO_2-$, $-NR'SO_2-$, $-CO-$, $-CO_2-$, $-CH_2-$, $-CF_2-$, $-CHF$, $-CONH-$,

-CONR'-, and -NR'-, where R' is alkyl, substituted alkyl, cycloalkyl, aryl, heteroaryl, heterocyclo;

A₁ is an optionally substituted aryl, heteroaryl, or a protecting group six-membered heterocyclic group having N as the only ring heteroatom;

R₀ and R₀' are independently selected from the group consisting of hydrogen and methyl;

R₁, R₂, R₃, and R₄ are independently selected from the group consisting of hydrogen, and optionally substituted loweralkyl, cycloloweralkyl, cyclicaminoalkyl, alkylaminoalkyl, loweralkoxy, amino, alkylamino, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, ~~heteroarylcarbonyl, heteroaralkylcarbonyl, and aryl and heteroaryl;~~

R₅ and R₈ are independently selected from the group consisting of hydrogen, halo, and optionally substituted loweralkyl, cycloalkyl, alkoxy, amino, aminoalkoxy, carbonyloxy, aminocarbonyloxy, alkylcarbonylamino, arylcarbonylamino, aralkylcarbonylamino, ~~heteroarylcarbonylamino, heteroaralkylcarbonylamino,~~ cycloimido, ~~heterocycloimido,~~ amidino, cycloamidino, ~~heterocycloamidino,~~ guanidinyl, aryl, biaryl, ~~heteroaryl, heteroarylaryl, heteroarylheteroaryl, heterocycloalkyl, heterocyclocarbonyloxy, heteroarylcarbonyloxy,~~ and arylsulfonamido;

R₆ is selected from the group consisting of hydrogen, and optionally substituted aryl, ~~heteroaryl, and heterocyclo;~~

R₇ is selected from the group consisting of hydrogen, hydroxy, halo, carboxyl, nitro, amino, amido, amidino, imido, cyano, sulfonyl, methanesulfonyl, and substituted or unsubstituted alkyl, alkoxy, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, ~~heteroarylcarbonyl, heteroaralkylcarbonyl,~~ alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, ~~heteroarylcarbonyloxy, heteroaralkylcarbonyloxy,~~ alkylaminocarbonyloxy, arylaminocarbonyloxy, formyl, loweralkylcarbonyl, loweralkoxycarbonyl, aminocarbonyl, aminoaryl, alkylsulfonyl, sulfonamido, aminoalkoxy, alkylamino, ~~heteroarylamine,~~ alkylcarbonylamino, alkylaminocarbonylamino, arylaminocarbonylamino, aralkylcarbonylamino, ~~heteroarylcarbonylamino,~~ arylcarbonylamino, ~~heteroarylcarbonylamino—~~cycloamido, cyclothioamido, cycloamidino,

heterocycloamidino, cycloalkyl, cycloimido, ~~heterocycloimido~~, guanidinyl, aryl, ~~heteroaryl~~, ~~heterocyclo~~, ~~heterocycloalkyl~~, arylsulfonyl and arylsulfonamido;

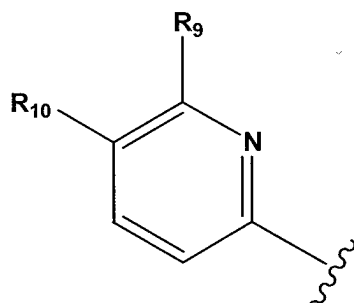
the tautomers thereof;

or a pharmaceutically acceptable salt thereof.

19. (Currently amended) A compound of claim 18 wherein R₁, R₂, and R₃ are hydrogen and R₄ is selected from the group consisting of hydrogen, methyl, ethyl, aminoethyl, and dimethylaminoethyl, ~~pyridylethyl, piperidinyl, pyrrolidinylethyl, piperazinylethyl and morpholinylethyl.~~

20. (Original) A compound of claim 18 wherein R₁, R₂, R₃, and R₄, are hydrogen.

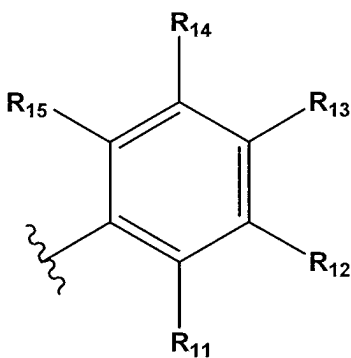
21. (Original) A compound of claim 18 wherein A₁ has the formula:



(IV)

wherein R₉ and R₁₀ are independently selected from the group consisting of hydrogen, hydroxy, nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidinyl, sulfonamido, carboxyl, formyl, loweralkyl, aminoloweralkyl, loweralkyl-aminoloweralkyl, haloloweralkyl, loweralkoxy, haloloweralkoxy, loweralkoxyalkyl, loweralkylaminoloweralkoxy, loweralkylcarbonyl, loweralkylcarbonyl, lowerheteroalkyl-carbonyl, alkylthio, aryl and, aralkyl.

22. (Previously presented) A compound of claim 18 wherein at least one of R₅ and R₈ is a substituted or unsubstituted moiety of the formula:



(V)

wherein R₁₁, R₁₂, R₁₃, R₁₄, and R₁₅ are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, carboxyl, hydroxy, and optionally substituted loweralkyl, loweralkoxy, loweralkoxyalkyl, haloloweralkyl, haloloweralkoxy, aminoalkyl, alkylamino, aminoalkylalkynyl, alkylaminoalkylalkynyl, alkylthio, alkylcarbonylamino, aralkylcarbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, aminocarbonyl, loweralkylaminocarbonyl, aminoaralkyl, loweralkylaminoalkyl, aryl, heteroaryl, cycloheteroalkyl, aralkyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, arylcarbonyloxyalkyl, alkylcarbonyloxyalkyl, heteroarylcarbonyloxyalkyl, aralkylcarbonyloxyalkyl, and heteroaralkylcarbonyloxyalkyl.

23. (Original) A compound of claim 22 wherein R₁₁, R₁₂, R₁₄ and R₁₅ are hydrogen and R₁₃ is selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, haloloweralkyl, aminocarbonyl, alkylaminocarbonyl and cyano.

24. (Original) A compound of claim 22 wherein R₁₁, R₁₃, and R₁₅ are hydrogen and R₁₂ and R₁₄ are independently selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, haloloweralkyl and cyano.

25. (Original) A compound of claim 22 wherein R₁₁, R₁₂, R₁₄, and R₁₅ are hydrogen and R₁₃ is heteroaryl.

26. (Original) A compound of claim 22 wherein R₁₁, R₁₂, R₁₄, and R₁₅ are hydrogen and R₁₃ is a heterocycloalkyl.

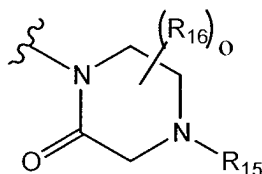
27. (Original) A compound of claim 22 wherein at least one of R₁₁, R₁₂, R₁₃, R₁₄, and R₁₅ are halo and the remainder of R₁₁, R₁₂, R₁₃, R₁₄, and R₁₅ are hydrogen.

28. (Currently amended) A compound of claim 18 wherein at least one of R₅ and R₈ is selected from the group consisting of dichlorophenyl, difluorophenyl, trifluoromethylphenyl, chlorofluorophenyl, bromochlorophenyl, ethylphenyl, methylchlorophenyl, ~~imidazolylphenyl~~, cyanophenyl, ~~morpholinophenyl~~ and cyanochlorophenyl.

29. (Currently amended) A compound of claim 18 wherein R₆ is substituted or unsubstituted aryl or heteroaryl.

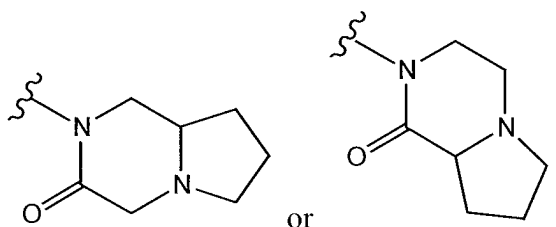
30. (Withdrawn) A compound of claim 18 wherein R₆ is substituted or unsubstituted pyridyl, pyrimidinyl, piperazinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl, triazolyl, thienyl, furanyl, quinolinyl, pyrrolylpyridyl, benzothiazolyl, benzopyridyl, benzotriazolyl, and benzimidazolyl.

31. (Withdrawn) A compound of claim 18 wherein R₆ is a monoketopiperazinyl group having the structure:



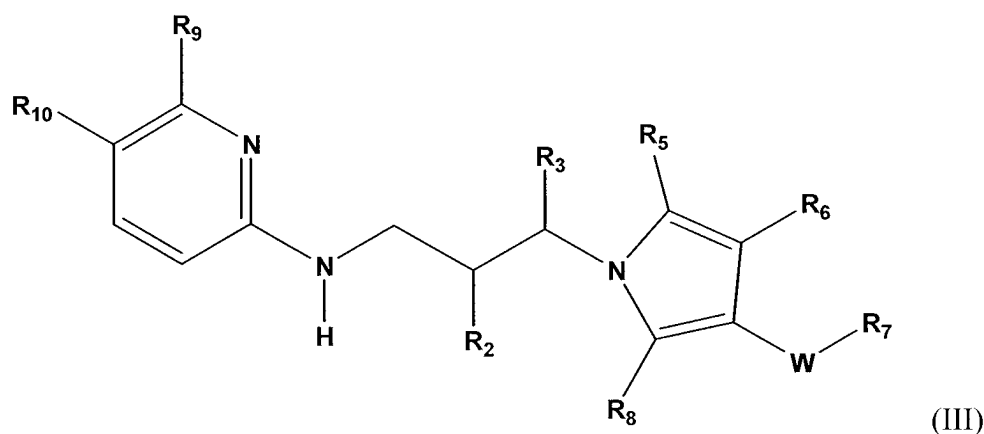
wherein R₁₅ and R₁₆ are independently selected from the group consisting of hydrogen, loweralkyl, loweralkynyl, aryl, heteroaryl, arylloweralkyl, loweralkylarylloweralkyl, haloloweralkyl, haloarylloweralkyl carbocyclic and heterocyclic; or R₈ can be taken with another R₁₆ or with R₁₅ to form a carbocyclic, heterocyclic or aryl ring; and o is an integer between 1 and 6.

32. (Withdrawn) A compound of claim 31 wherein R₁₅ is loweralkyl, or R₁₅ is taken with R₁₆ to form a group having the structure:



33. (Original) A compound in claim 18 wherein R₅ and R₈ are independently hydrogen or lower alkyl.

34. (Currently amended) A compound having the structure:



wherein W is absent or is selected from the group consisting of -O-, -S-, -S(O)-, -SO₂-, -NH-, -NH-CO-, -NR'CO-, -NHSO₂-, -NR'SO₂-, -CO-, -CO₂-, -CH₂-, -CF₂-, CHF-, -CONH-, -CONR'-, and -NR'-, where R' is alkyl, substituted alkyl, cycloalkyl, aryl, heteroaryl, heterocyclo;

R₂ and R₃ are independently selected from the group consisting of hydrogen, hydroxyl, and optionally substituted loweralkyl, cycloloweralkyl, cyclicaminoalkyl, alkylaminoalkyl, loweralkoxy, amino, alkylamino, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteroaralkylcarbonyl, and aryl and heteroaryl;

R₅ and R₈ are independently selected from the group consisting of hydrogen, halo, and optionally substituted loweralkyl, cycloalkyl, alkoxy, amino, aminoalkoxy, carbonyloxy, aminocarbonyloxy, alkylcarbonylamino, arylcarbonylamino, aralkylcarbonylamino, ~~heteroarylcarbonylamino, heteroaralkylcarbonylamino,~~ cycloimido, ~~heterocycloimido,~~ amidino, cycloamidino, ~~heterocycloamidino,~~ guanidinyl, aryl, biaryl, ~~heteroaryl, heteroaryllaryl,~~ ~~heteroarylheteroaryl,~~ ~~heterocycloalkyl,~~ ~~heterocyclocarbonyloxy,~~ ~~heteroarylcarbonyloxy,~~ and arylsulfonamido;

R₆ is selected from the group consisting of hydrogen, and optionally substituted aryl, ~~heteroaryl,~~ and heterocyclo;

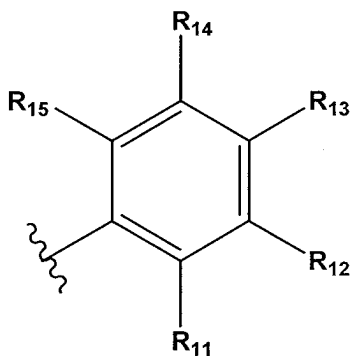
R₇ is selected from the group consisting of hydrogen, hydroxy, halo, carboxyl, nitro, amino, amido, amidino, imido, cyano, sulfonyl, methanesulfonyl, and substituted or unsubstituted alkyl, alkoxy, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteroaralkylcarbonyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, ~~heteroarylcarbonyloxy, heteroaralkylcarbonyloxy,~~ alkylaminocarbonyloxy, arylaminocarbonyloxy, formyl, loweralkylcarbonyl, loweralkoxycarbonyl, aminocarbonyl, aminoaryl, alkylsulfonyl, sulfonamido, aminoalkoxy, alkylamino, ~~heteroarylamine,~~ alkylcarbonylamino, alkylaminocarbonylamino, arylaminocarbonylamino, aralkylcarbonylamino, ~~heteroarylcarbonylamino,~~ arylcarbonylamino, ~~heteroarylcarbonylamino—cycloamido,~~ cyclothioamido, cycloamidino, heterocycloamidino, cycloalkyl, cycloimido, ~~heterocycloimido,~~ guanidinyl, aryl, ~~heteroaryl,~~ ~~heterocyclo,~~ ~~heterocycloalkyl,~~ arylsulfonyl and arylsulfonamido;

R₉ and R₁₀ are independently selected from the group consisting of hydrogen, hydroxy, nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidinyl, sulfonamido, carboxyl, formyl, loweralkyl, aminoloweralkyl, loweralkylaminoloweralkyl, haloloweralkyl, loweralkoxy, haloloweralkoxy, loweralkoxyalkyl, loweralkylaminoloweralkoxy, loweralkylcarbonyl, loweraralkylcarbonyl, lowerheteroaralkylcarbonyl, alkylthio, aryl and, aralkyl. Most preferably, A is selected from the group consisting of aminopyridyl, nitropyridyl, aminonitropyridyl, cyanopyridyl, cyanothiazolyl, aminocyanopyridyl, trifluoromethylpyridyl, methoxypyridyl, methoxynitropyridyl, methoxycyanopyridyl and nitrothiazolyl; the tautomers thereof; or a pharmaceutically acceptable salt thereof.

35. (Currently amended) A compound of claim 34 wherein R₁, R₂, and R₃ are hydrogen and R₄ is selected from the group consisting of hydrogen, methyl, ethyl, aminoethyl, and ~~dimethylaminoethyl, pyridylethyl, piperidinyl, pyrrolidinylethyl, piperazinylethyl and morpholinylethyl.~~

36. (Original) A compound of claim 34 wherein R₁, R₂, R₃, and R₄, are hydrogen.

37. (Previously presented) A compound of claim 34 wherein at least one of R₅ and R₇ is a substituted or unsubstituted moiety of the formula:



wherein R₁₁, R₁₂, R₁₃, R₁₄, and R₁₅ are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, carboxyl, hydroxy, and optionally substituted loweralkyl, loweralkoxy, loweralkoxyalkyl, haloloweralkyl, haloloweralkoxy, aminoalkyl, alkylamino, aminoalkylalkynyl, alkylaminoalkylalkynyl, alkylthio, alkylcarbonylamino, aralkylcarbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, aminocarbonyl, loweralkylaminocarbonyl, aminoaralkyl, loweralkylaminoalkyl, aryl, heteroaryl, cycloheteroalkyl, aralkyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, arylcarbonyloxyalkyl, alkylcarbonyloxyalkyl, heteroarylcarbonyloxyalkyl, aralkylcarbonyloxyalkyl, and heteroaralkylcarbonyloxyalkyl.

38. (Original) A compound of claim 37 wherein R₁₁, R₁₂, R₁₄ and R₁₅ are hydrogen and R₁₃ is selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, haloloweralkyl, aminocarbonyl, alkylaminocarbonyl and cyano.

39. (Original) A compound of claim 37 wherein R₁₁, R₁₃, and R₁₅ are hydrogen and R₁₂ and R₁₄ are independently selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, haloloweralkyl and cyano.

40. (Original) A compound of claim 37 wherein R₁₁, R₁₂, R₁₄, and R₁₅ are hydrogen and R₁₃ is heteroaryl.

41. (Original) A compound of claim 37 wherein R₁₁, R₁₂, R₁₄, and R₁₅ are hydrogen and R₁₃ is a heterocycloalkyl.

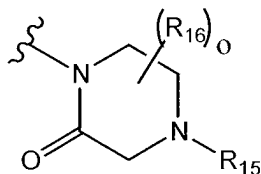
42. (Original) A compound of claim 37 wherein at least one of R₁₁, R₁₂, R₁₃, R₁₄, and R₁₅ are halo and the remainder of R₁₁, R₁₂, R₁₃, R₁₄, and R₁₅ are hydrogen.

43. (Currently amended) A compound of claim 34 wherein at least one of R₅ and R₈ is selected from the group consisting of dichlorophenyl, difluorophenyl, trifluoromethylphenyl, chlorofluorophenyl, bromochlorophenyl, ethylphenyl, methylchlorophenyl, ~~imidazolylphenyl~~, cyanophenyl, ~~morpholinophenyl~~ and cyanochlorophenyl.

44. (Currently amended) A compound of claim 34 wherein R₆ is substituted or unsubstituted aryl or heteroaryl.

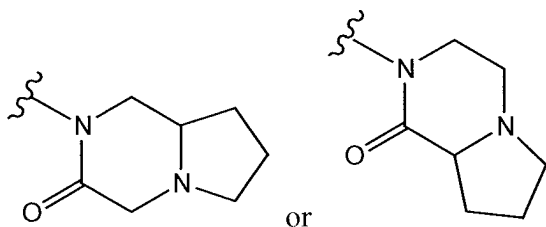
45. (Withdrawn; Currently amended) A compound of claim 34 wherein R₆ is substituted or unsubstituted pyridyl, pyrimidinyl, piperazinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl, triazolyl, thienyl, furanyl, quinolynyl, pyrrolylpyridyl, benzothiazolyl, benzopyridyl, benzotriazolyl, and benzimidazolyl.

46. (Withdrawn) A compound of claim 34 wherein R₆ is a monoketopiperazinyl group having the structure:



wherein R₁₅ and R₁₆ are independently selected from the group consisting of hydrogen, loweralkyl, loweralkynyl, aryl, heteroaryl, arylloweralkyl, loweralkylarylloweralkyl, haloloweralkyl, haloarylloweralkyl carbocyclic and heterocyclic; or R₈ can be taken with another R₁₆ or with R₁₅ to form a carbocyclic, heterocyclic or aryl ring; and o is an integer between 1 and 6.

47. (Withdrawn) A compound of claim 46 wherein R₁₅ is loweralkyl, or R₁₅ is taken with R₁₆ to form a group having the structure:



48. (Original) A compound in claim 34 wherein R₅ and R₈ are independently hydrogen or lower alkyl.

49. (Original) A composition comprising an amount of a compound of claim 1 effective to inhibit GSK3 activity in a human or animal subject when administered thereto, together with a pharmaceutically acceptable carrier.

50. (Original) A composition comprising an amount of a compound of claim 18 effective to inhibit GSK3 activity in a human or animal subject when administered thereto, together with a pharmaceutically acceptable carrier.

51. (Original) A composition comprising an amount of a compound of claim 34 effective to inhibit GSK3 activity in a human or animal subject when administered thereto, together with a pharmaceutically acceptable carrier.

52. (Withdrawn) A method of inhibiting GSK3 activity in a human or animal subject, comprising administering to the human or animal subject a composition of claim 49.

53. (Withdrawn) A method of inhibiting GSK3 activity in a human or animal subject, comprising administering to the human or animal subject a composition of claim 50.

54. (Withdrawn) A method of inhibiting GSK3 activity in a human or animal subject, comprising administering to the human or animal subject a composition of claim 51.

55. (Withdrawn) A method of treating a cell comprising administering to the cell an amount of a compound of claim 1 effective to inhibit GSK3 activity in the cell.

56. (Withdrawn) A method of treating a cell comprising administering to the cell an amount of a compound of claim 18 effective to inhibit GSK3 activity in the cell.

57. (Withdrawn) A method of treating a cell comprising administering to the cell an amount of a compound of claim 34 effective to inhibit GSK3 activity in the cell.

58. (Withdrawn) A method for treating a GSK3-mediated disorder in a human or animal subject, comprising administering to the human or animal subject an amount of a compound of claim 1 effective to inhibit GSK3 activity in the subject.

59. (Withdrawn) A method of claim 58, wherein the composition is administered by a mode of administration selected from the group consisting of oral, subcutaneous, transdermal,

transmucosal, iontophoretic, intravenous, intrathecal, buccal, sublingual, intranasal, and rectal administration.

60. (Withdrawn) A method of claim 58, wherein said GSK3-mediated disorder is selected from the group consisting of diabetes, Alzheimer's disease, obesity, atherosclerotic cardiovascular disease, essential hypertension, polycystic ovary syndrome, syndrome X, ischemia, traumatic brain injury, bipolar disorder, immunodeficiency and cancer.

61. (Withdrawn) A method of claim 58, which further comprises administering to the subject one or more additional active agents.

62. (Withdrawn) A method of claim 58, wherein the GSK3-mediated disorder is diabetes and the additional active agent is selected from the group consisting of insulin, troglitazone, rosiglitazone, pioglitazone, glipizide and metformin.

63. (Withdrawn) A method for treating a human or animal subject, comprising administering to the human or animal subject an amount of a compound of claim 1 effective to inhibit tau phosphorylation in the subject.

64. (Withdrawn) The method of claim 63 wherein the compound is 1-{3-[(6-amino-5-nitropyridin-2-yl)amino]propyl}-4-(2,4-dichlorophenyl)-N-[(1S)-2-hydroxy-1-methylethyl]-1H-pyrrole-3-carboxamide.

65-69. (Cancelled)